strong solution of sulphuret of potassium (800), fig. 70; and the galvanometer was soon at o°. On heating and boiling the j fluid on the side A (903) the platinum in it became negative; j cooling that side,, by pouring a little water over it from a jug, and heating the side B, the platinum there in turn became negative; and, though the action was irregular., the same general result occurred however the temperatures of the parts were altered. This was not due to the chemical effect of the electrolyte on the heated platinum. Nor do I believe it was a true thermo current (921); but if it were the latter, then the heated platinum was *negative* through the electrolyte to the cold platinum. I believe it was altogether the increased effect of the air upon the electrolyte at the heated side; and it is evident that the application of the heat, by causing currents in the fluid and also in the air, facilitates their mutual action at that place. It has been already shown,, that lifting up a platinum wire in this solution, so as to expose it for a moment to the air (815), renders it negative when reimmersed, an effect which is in perfect accordance with the assumed action of the heated air and fluid in the present case. The interference of this effect is obviated by raising the temperature of the electrolyte quietly before the wires are immersed (906), and observing only the first effect.

910. *Effect of heat.*—In certain cases where two different metals are used, there is a very remarkable effect produced on heating the negative metal. This will require too much detail to be described fully here; but I will briefly point it out and illustrate it by an example or two.

911. When two platinum wires were compared in hot and cold dilute sulphuric acid (923), they gave scarcely a sensible trace of any electric current. If any real effect of heat occurred, it was that the hot metal was the least degree positive. When silver and silver were compared, hot and cold, there was also no sensible effect. But when platinum and silver were compared in the same acid, different effects occurred. Both being cold, the silver in the A side, fig. 70 (903), was positive about 4°, by the galvanometer; moving the platina on the other side B

did not alter this effect, but on heating the acid and platinum there, the current became very powerful, deflecting the needle 30°, and the silver was positive. Whilst the heat continued, the effect continued; but on cooling the acid and platinum it went down to the first degree. No such effect took place at the silver; for on heating that side, instead of becoming